

REMARKS

Upon entry of the present amendment, claims 3, 18, 19, 21-22, 25-26, 28, and 42-53 are pending in the application.

Claim 19 has been amended to provide a different numbering style. Claim 3 has been amended, as supported on pages 75-76, with respect to the amount of components in the base color (A2). New claims 42-53 have been added, to further define the claimed invention, as further explained below. No claims have been canceled.

No new matter has been introduced by the new claims or amendments.

Amendments to, cancellation of, and additions to, the claims, as set forth above, are made in order to streamline prosecution in this case by limiting examination and argument to certain claimed embodiments that presently are considered to be of immediate commercial significance. Amendment or cancellation of the claims is not in any manner intended to, and should not be construed to, waive Applicants' right in the future to seek such unamended or cancelled subject matter, or similar matter (whether in equivalent, broader, or narrower form) in the present application, and any continuation, divisional, continuation-in-part, RCE, or any other application claiming priority to or through the present application, nor in any manner to indicate an intention, expressed or implied, to surrender any equivalent to the claims as pending after such amendments or cancellations.

Reconsideration is respectfully requested in view of the foregoing amendments and following remarks. The following remarks are organized according to the Final Rejections of September 11, 2008, maintained in the Advisory Action of December 24, 2008, the arguments of which Applicants will address below.

1. **Unobviousness of Claims 3, 18-19, 21-22, 25-26, and 28 over U.S. Patent No. 6,403,701 to Reusmann et al., hereafter "Reusmann".**

Applicants respectfully assert that the present claims are patentable over Reusmann because, at the least, it does not provide for a *prima facie* case of obviousness and, in addition, the present invention provides unexpectedly superior results.

To briefly recap, the present invention is directed to a modular system for preparing aqueous coating materials in precision-attunable shades and optical effects. Thus, it is important to note that the invention is not directed to merely a mixing of materials in general. As defined on page 8 of the originally filed specification, the term "module" refers to "a standardized, ready-to-use commercial product whose profile of performance properties is precisely matched to and supplements the profiles of properties of other modules, so that the modules overall may be combined to form a modular system." Furthermore, as recited in the independent claims, the process involves mixing modules differing in material composition and function and stored separately from one another shortly before application of the coating material.

In this regard, it is noted that the present claims are directed to a process, not just a resulting composition, or components of a resulting composition, and the modules of the present system must comprise one or more storage-stable individual components. The individual components or compositions of the modules are not the same as mixing of compositions that are mixed immediately prior to preparation of a final "aqueous coating material," in the absence of storage capability. Storage stability is usually not inherent in a composition and cannot be assumed to exist, but typically must be pre-designed.

In light of the prior art, it was surprising and unforeseeable for one of ordinary skill in the art that the modular system of the present invention would have possessed a storage stability that matches or even exceeds that of known modular systems, while providing coating materials that have a significantly higher pigment content and can be used to produce coatings which in terms of their hiding power are superior to prior art coatings. As noted on page 12, lines 6-12, of the present specification, "Not least a surprise was the key advantage that the aqueous color module (II) and the aqueous,

pigment-free mixing varnish module (III), on the one hand, and the substantially water-free color and/or effect module (I), on the other hand, are very highly compatible with one another and cause no problems whatsoever on mixing.”

The above-mentioned advantages of the present invention is illustrated by the inventive examples and comparative example. The Table on page 97 provides an example in which, using the same viscosity for all coatings, the inventive coating could be furnished with a higher pigment content than the non-inventive coating material. In fact, as stated on page 98, lines 23-25, in terms of the overall visual impression it gave, the inventive multicoat system was clearly superior to the non-inventive system. As also evident from comparing the data in the Table on page 97, the inventive basecoat was also clearly superior to the non-inventive basecoat (which represents the cited prior art) in terms of pigment content (8% versus 2.9%) and hiding power (10 μm versus 20 μm).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

The Examiner is quite correct in referring to Reusmann as the primary reference since, as in the present invention, it is directed to a mixing or modular system. However, Reusmann clearly teaches a different modular system than the present invention.

Reusmann is directed to a modular system that produces coating compositions having improved condensation resistance. (Reusmann, column 1, line 8-10). In recent times, the requirements for water and moisture resistance, especially for condensation resistance, of automotive refinishes have risen. (Reusmann, column 2, lines 35-37.)

Reusmann discloses that it has surprisingly been found that the condensation resistance of finished coatings produced from the mixer systems of the general type described in DE-A4110520 can be increased considerably if the mixing component B

described therein has added to it, as binder, a polymer which is obtainable by subjecting an ethylenically unsaturated monomer or a mixture of ethylenically unsaturated monomers to free-radical polymerization in the presence of a water-insoluble initiator and in an aqueous dispersion of a polyurethane resin which has a number-average molecular weight of between 1000 and 30,000 Daltons and on average from 0.05 to 1.1 polymerizable double bonds, wherein the weight ratio between the polyurethane resin and the ethylenically unsaturated monomer or monomer mixture is between 1:10 and 10:1. (Reusmann, column 2, lines 43-58).

Reusmann's modular system is a system, not merely arbitrary compositions. Consequently, there is no expectation that any composition per se can be used in the module system merely because it is a coating composition or component thereof. Importantly, Reusmann states:

It is essential to the invention that the base colors A are essentially, and preferably completely, free of water. The water content of the base colors should be less than 5% by weight, based on the overall weight of the base color.

[Col. 4, lines 56-59]

Component A of Reusmann corresponds to Module I of the present invention. Thus, Reusmann states:

Component A is prepared by methods known to the skilled worker, by mixing and, if desired, dispersing the individual components [of Component A]. Thus, the incorporation of coloring pigments usually takes place by dispersing the respective pigments with one or more of the above-described binders, which are preferably employed in the form of solutions in organic solvents. If desired, further organic solvent can be added for dispersing.

[Col. 5, lines 28-37.]

Component A is solvent-based and all the color and/or effect is provided by Component A. No color is provided by an aqueous component in Reusmann. Component B, the water-containing module of Reusmann, corresponds to Module III in the present invention. No color is provided therein. Referring to claim 1 of Reusmann, the system comprises "at least one pigment-free component B." It is without a doubt

that the module system of Reusmann excludes the use of Module II of the present invention.

In fact, Reusmann describes their invention as an improvement on the modular system (or mixer system) of DE-A 41 10 520. See Col. 1, line 66, to col. 2, line 37, of Reusmann. Reusmann describes DE-A 41 10 520 as follows:

Mixer systems in accordance with DE-A 41 10 520 consist of:

- A) various base colors, which contain less than 5% by weight of water..... and
- B) at least one water-containing, pigment-free component B.

[Col. 2, lines 14-22.]

Similarly, the present originally filed application states, immediately on page 1, regarding this same prior art.

The German patent application DE-A-41 10 520 discloses a mixer system [that] comprises substantially water-free color and/or effect base colors and at least one aqueous, pigment-free mixing vanish. Owing to their variability, this mixer system and the coating materials prepared from it go a substantial way toward meeting the ever-increasing requirements of the market. However, they are still capable of further improvement in terms of their hiding power.

Importantly, the present originally filed application further states on page 73, lines 6-8, in distinction to DE-A-41 10 520, that “The further key constituent of the modular system of the invention is at least one aqueous color module (II).”

Since Reusmann is directed to a modular system (or mixing system) for preparing a final aqueous coating material to be applied to a substrate, which modular system is contrary to the modular system of the present system, it would be necessary for an obviousness rejection to show the reason or motivation for Reusmann to change their modular system, not merely to show one particular composition or binder outside such a system. In terms of modules in a module system that are used to form an aqueous coating material by dilution with a component (B), namely a water-containing, pigment-free component, Reusmann teaches only solvent-borne base color modules. Moreover, it is very unlikely that Reusmann would be motivated to modify their system with an additional component that, not only violates the “essential” guidelines or requirements of

the system, but that would require, for no good reason, the difficulties or problems of additional storage, additional mixing complications, and additional time and expense.

The Advisory Action asserts:

Argument [of Applicants] is that Reusmann does not disclose claimed aqueous module (II). Claimed aqueous color module (II) is expected in Reusmann invention. Reusmann discloses a water-dilutable coating composition, which can be diluted with water. Binders include polyurethane resins...and can also include water-thinnable polyacrylic resins or water-dispersible polymer resins.... A polyacrylate thickener in water is disclosed...Water in the amount of at least 10% by weight is expected...Reusmann does disclose claimed process for preparing water-dilutable coating composition..."

Applicants respectfully submit that the Advisory Action seems to be confusing the presence of water in a module of Reusmann, or perhaps the presence of water in a non-modular final aqueous color coating material, with a system based on an aqueous color module for producing the final aqueous color coating material. The module system of Reusmann uses water and uses color and prepares an aqueous color coating material using the modules, but Reusmann does NOT teach a modular system of the present invention comprising an aqueous base color module. As discussed above, the essential feature of Reusmann as an improvement of the system of DE A 41 10 520 is with respect to binder, but Reusmann continues to be based on color modules that are "essentially water-free," though the resulting color coating material prepared from the modules contains water. The Office Action seems to be overlooking these critical distinctions of the present module system compared to the explicit teachings of Reusmann with respect to their module system or else confusing different features in two different module systems.

2. **Unobviousness over U.S. Patent No. 6,403,701 to Reusmann et al., hereafter "Reusmann", in view of EP 0 081 994 to Kawakami et al., hereafter "Kawakami," or U.S. Patent No. 6,001,915 to Schwarte et al., hereafter "Schwarte".**

At the very least, aside from an alleged "expectation," Reusmann does not anywhere mention the presence of component (A2) of the presently claimed invention,

which is an aqueous color-imparting base color. Such a base color is nowhere described or hinted at in Reusmann, but is contrary to the specific requirements of Reusmann's modular system. This has been consistently affirmed by the Examiner, for example, by stating with respect to the use of the secondary reference to Schwarte:

Reusmann does not show coating composition comprising three modules = components as claimed part (A2) of an aqueous color module comprising pigment, binder and water in the present claim 3.

[04/02/2008 Final Rejection page 6, section 4, first paragraph.]

With respect to the secondary reference to Kawakami, the Examiner earlier stated:

The difference between the present claims and Reusmann invention is that Reusmann does not disclose a (A-2) component of an aqueous coating composition comprising a color-imparting pigment, binder and water.

[9/24/2007 Office Action, page 5, final paragraph, affirmed by the Examiner in the Advisory Action of 1/14/2008.]

Yet, in the Advisory Action of 12/24/2008, the Examiner states:

Applicant requests clarification as to how secondary reference to Schwarte provides any of the missing limitations, motivation, or expectation of success that Reusmann fails to provide. First, Reusmann does not fail. [Applicants wonder, therefore why the secondary references are cited.] ...Schwarte discloses polyurethane modified polyacrylate which is suitable for producing aqueous pigmented coating material...the same binder is readable in both inventions [Schwarte and Reusmann]...Kawakami discloses a water-soluble polyamidopolyurea binder, conventional pigment and water for producing an aqueous coating composition. Both references [Reusmann and Kawakami] disclose the same utility of using an aqueous coating composition...."

But, no, both references do not disclose the same utility. Reusmann is directed to a modular system and Kawakami is not. Placing Schwarte's binder in Reusmann's base color module is perhaps reasonable, but that alone would not change the system of Reusmann to obtain an aqueous base color module. Again a final aqueous coating material is not the same as a module used in the module system for preparing the final aqueous coating material.

Kawakami merely discloses a thermosetting resin prepared by mixing or reacting an alkylene diamine or polyalkylenepolyamine with an epihalohydrin, and a water-soluble resin obtained by reacting urea, a polyalkylenepolyamine, and a dibasic carboxylic acid and reacting the resultant polyamidopolyurea formaldehyde. (Kawakami, Abstract.) The fact that Kawakami's resin is substantially different from Reusmann's binder (B) just adds to the lack of motivation.

Similarly, Schwarte merely discloses a polyurethane modified acrylic that can be used in basecoats, clearcoats, and powder coatings. (Schwarte, col. 8, lines 15-67, and col. 9, lines 1-24) Schwarte fails to make any mention whatsoever of "separately stored mixing modules differing in material composition and function" as is required by Applicants' independent claims. Rather, Schwarte's discussions of basecoats, clearcoats (solvent and water based) and powder coatings appear to be limited to traditional coating systems that are not comprised of separate modules that have different composition and function and are stored separately until shortly before application or are used in any processes requiring the same. Thus, none of Schwarte's disclosures appear to be relevant with regard to Reusmann's deficiencies as discussed above.

In view of the above, Applicants respectfully asserts that there is no motivation to combine the above references because, first, Reusmann is directed to a modular system and Kawakami or Schwarte are not, and second, according to the teaching of Reusmann, one with ordinary skill in the art would be discouraged to radically change the non-aqueous base color module of Reusmann, since it would defeat the purpose (no expectation of success) to obtain resistance to condensation.

In view of the above, Applicant respectfully asserts that the present claims are patentable over the combination of Reusmann and Schwarte or Kawakami, at least because there is no suggestion or motivation to combine Schwarte or Kawakami with Reusmann to obtain the present module system, and because such combination would render Reusmann unsatisfactory for its intended purpose, the latter teaching away from including any modules other than A and B and specifically teaching away from an aqueous base color module in addition to a non-aqueous base color module.

The courts have held that “[i]f the proposed modification would render the prior art invention being modified unsatisfactorily for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon* 733 F. 2d 900, 221 USPQ 1125 (Fed. Cir. 1984). The courts have also held that “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” *In re Ratti* 270 F. 2d 810, 123 USPQ 349 (CCPA 1959).

NEW CLAIMS

New independent claims 42 and 53 contain all the limitation of independent claim 3 and additional limitations. Specifically, claims 42 and 53 (like claim 22) require the module (IV), a least one pigment-free rheology module. Thus, these claims recite that the module system comprises at least one pigment-free rheology module (IV). That is, module (IV), which is no longer optional in these claims, comprises an aqueous medium and at least one rheology control additive. Applicant respectfully asserts that these claims 22 are further patentable over Reusmann and Schwarte or Kawakami at least because the combination does not teach or suggest Applicants' four separate modules.

In addition, new claims 42 and 53 recite that the process is used to prepare an aqueous “basecoat” coating material “for use with a clearcoat applied wet-on-wet to produce a multicoat color, or color and effect, coating system,” as supported at least on page 85, lines 13-24. Independent claim 53 further requires that the module system “consists of” the four modules.

The new independent claims 42 and 53 further include limitations with respect to the amounts of the components in module (A1), as supported at least on page 70-72. Similarly, claim 53 further recites the amounts of the components in the at least one pigment-free mixing varnish module (III), as supported on page 79, and the amounts of the components in the at least one pigment-free rheology module (IV), as supported on page 81.

Furthermore, new claims 49-50 and 53 further require that the binder (a11) in module (A1) is a polyurethane containing carboxylic and/or carboxylate groups and optionally hydroxyl groups, having a number-average molecular weight of from 850 to 20,000 and an acid number of 20 to 150 mg KOH/g, as supported on page 51. Claims 50 and 53 further require that the at least one binder (a11), the at least one water-soluble or water-dispersible binder (a21), and the at least one water-soluble or water-dispersible binder (b1) are polyurethane resins, as supported on page 22.

New claim 43 further requires that the aqueous coating material that is prepared has a pigment content of at least about 8.0%, as supported by the example on page 97.

New claim 44 recites that the at least one pigment-free rheology module comprises a phyllosilicate, as supported on page 81. New claim 45 recites that the at least one base color (A1) comprises only effect pigments or only color pigments, as supported on page 70, lines 27-30. New claim 46 recites that the at least one base color (A1) comprises an effect pigment selected from the group consisting of metal flake pigment, pearlescent pigment, interference pigment, and mixtures thereof, as supported on page 54, lines 5-17. New claim 47 recites that the module (I) takes on all of the function of effect and part of the function of coloring, and new claim 48 recites that the module (I) serves solely for imparting effect, as supported on page 13. New claim 49 recites that the binder (a11) in module (A1) is an acrylate addition copolymer, polyester, and/or polyurethane, each containing carboxylic and/or carboxylate groups and optionally hydroxyl groups, having a number-average molecular weight of from 850 to 20,000, as supported on pages 17, 21, and 22. New claim 51 recites that the at least one additive (b5) in the mixing varnish B further comprises at least one rheology control additive, as supported on page 81, lines 16-18.

CONCLUSION

Applicant respectfully submits that the Application and pending claims are patentable in view of the foregoing remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,

/MaryEGolota/

Mary E. Golota
Registration No. 36,814
Cantor Colburn LLP
(248) 524-2300

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CORRESPONDENCE ADDRESS ONLY

BASF CORPORATION
1609 Biddle Avenue
Wyandotte, MI 48192
Customer No. 77224

MEG/CPK